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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/881,195	06/14/2001	Kazuyoshi Takeda	9319S-000230	5127

27572 7590 06/02/2005

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EXAMINER

PROCTOR, JASON SCOTT

ART UNIT	PAPER NUMBER
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2123

DATE MAILED: 06/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/881,195

Applicant(s)

TAKEDA, KAZUYOSHI

Examiner

Jason Proctor

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 22 March 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) 12 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 October 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claims 1-12 were presented for examination and rejected in office action dated December 23, 2004. Claims 1-11 have been amended and presented for reconsideration. Claim 12 has been cancelled. Claims 1-11 have been rejected.

Response to Applicants' Remarks

Terminal Disclaimer

The terminal disclaimer filed on March 22, 2005 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of 09/838,490 has been reviewed and is accepted. The terminal disclaimer has been recorded.

Rejections under 35 U.S.C. § 101

Regarding the rejection of claims 1-11 under 35 U.S.C. § 101, the Examiner thanks Applicant for amending the claim language to place the claimed invention within the categories of statutory invention. The previous rejections under 35 U.S.C. § 101 have been withdrawn.

Claim Objections

The Examiner thanks Applicant for correcting the typographical error of claim 6. The Examiner thanks Applicant for clarification regarding the meaning of the limitations of

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claim 7. Applicant has submitted that claim 7 recites additional structure of the simulator unit. The previous objections of claims 6 and 7 have been withdrawn.

Rejections under 35 U.S.C. § 112

Regarding the rejection of claims 1-5 and 8 as being indefinite, the Examiner thanks Applicant for arguments establishing the definite nature of these claims as amended.

Rejections under 35 U.S.C. § 102

Regarding the rejection of claims 1-11 under 35 U.S.C. § 102(b) as being anticipated by US Patent No. 5,233,611 to Triantafyllos et al. (Triantafyllos), in reference to claim 1, Applicant argues primarily that:

Applicant notes that claim 1 recites an automatic evaluation method with steps of performing a simulation of at least one operation of a target system operating a target program in response to an input event, and stopping the simulation and capturing an output result of the simulation by referring to an output screen when a renewal completion notification is reported. Triantafyllos does not teach or suggest these steps.

and

The Triantafyllos system does not perform a simulation of an operation of a target system operating a target program. Rather, in the Triantafyllos system, the application program is operated in regular operation mode, apparently in its normal operating environment, while user input keystrokes are simulated.

The Examiner respectfully traverses this argument as follows:

Applicant is correct that in Triantafyllos, user keystrokes are simulated. However, when testing an application that performs operations on user input keystrokes, this clearly constitutes a simulation of an operation of a target program. Further, Triantafyllos teaches that the system comprises an *application program 18* being tested that operates on an *operating system 14* that communicates with the *host*

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computer 20 (all of Fig. 1). As an expressly stated goal of Triantafyllos is to construct the system with one computer (column 2, lines 21-23), it directly follows that Triantafyllos teaches a target system (*operating system 14*) operating a target program (*application program 18*), and as set forth above, simulation of operation of that target program (*simulation of user keystrokes*).

Applicant has not cited support in the disclosure to distinguish the meaning of “a target system operating a target program” from the system taught by Triantafyllos. Applicant has failed to show a patentable distinction between this term and the system of Triantafyllos. Applicants’ arguments on this point are unpersuasive.

Applicant further argues:

In Triantafyllos, the application program is operated in its normal operating environment, and is not stopped when a renewal completion notification is reported. The examiner states that in every embodiment disclosed by Triantafyllos, the simulation idles while waiting for the next input event. Applicant notes that idling while waiting for an input event does not amount to stopping the simulation in that the application program in Triantafyllos continues to operate while idling.

The Examiner respectfully traverses this argument as follows:

Applicant is correct that in Triantafyllos, the simulation *idles* while waiting for the next input event. However, the Examiner cannot regard this as patentably distinguishable over a method that recites stopping the simulation for the following reasons.

The Authoritative Dictionary of IEEE Standards, Seventh Edition provides the following definitions:

idle (2) (software) Pertaining to a system or component that is operational and in service, but not in use.

halt (A) Most commonly, a synonym for **stop**. **(B)** Less commonly, a synonym for **pause**.

halt instruction See: pause instruction.

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pause instruction A computer instruction that specifies suspension of the execution of a computer program. *Note:* A pause instruction does not cause an exit from the program. *Synonym:* halt instruction.

It is clear from these definitions that although Triantafyllos uses the term "idles" (column 9, lines 58-60 and exemplified at column 8, lines 24-50), it is uncontested that the simulation is *waiting* for the next command, i.e. the next input character of the test case. Applicants' claimed and disclosed invention performs similarly, where the simulation is "stopped" pending the capture of simulation results, yet some portion of Applicants' simulation must remain operational and in service else it would be impossible to signal the simulation to resume operation. The Examiner observes that Applicant has not cited support in the disclosure to distinguish "stopping" from "idling". Applicant could have claimed that the simulation "idles" while capturing simulation results and Triantafyllos could have described that his simulation "stops" while waiting for the next input character.

Applicant has failed to show a patentable distinction between the terms "idles" and "stopping" as used and known in the art of computer software. As a result, the Examiner regards "stopping the simulation" as synonymous with and functionally equivalent to the use of the term "idles" in the system of Triantafyllos.

Applicants' arguments on this point are unpersuasive.

Applicant provides analogous arguments for claim 6, which are respectfully traversed as above. Applicant argues that claims 2-5 and 7-11 are allowable as depending from an allowable base claim which are moot in light of the Examiner's traversals.

Outstanding Rejections

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Triantafyllos et al. US Patent No. 5,233,611 hereafter referred to as Triantafyllos.

Regarding claim 1, Triantafyllos teaches a method for automatically evaluating a program (column 3, lines 40-69) operating on a target system (column 3, lines 55-59; column 12, lines 18-44) by referring to an output screen as a result of a simulation of an arbitrary input event (column 3, lines 62-69; column 4, lines 29-39; column 10, lines 4-25; column 10, lines 49-52), the method comprising:

using a semaphore to perform the simulation at a time when the output screen becomes definite and referencing the output screen in accordance with the time (column 8, line 64 – column 9, line 17; column 9, lines 45-55, column 10, lines 4-15), and

comparing the result of the simulation with data prepared in advance so that an automatic evaluation is carried out (column 10, lines 4-25; column 4, lines 29-39).

storing a comparison result indicating whether the program performed correctly or incorrectly (column 4, lines 29-39).

Regarding claim 2, Triantafyllos teaches that the method waits a predetermined amount of time to reference the output screen (LOOKFOR command description, column 5, lines 16-32; column 10, lines 35-48).

Regarding claim 3, Triantafyllos teaches that the time when the output screen becomes definite is determined by repeatedly sampling the screen memory until a predetermined time threshold is surpassed (column 10, lines 12-48). This is considered functionally equivalent to carrying out a logical sum operation of individual simulation results, since the method taught by Triantafyllos repeatedly scans the screen memory until a definite result of the simulation can be determined, this result being a Boolean true or false value.

Regarding claim 4, Triantafyllos teaches that the automated function test program includes a communication program, the communication program sends input events to the application under test (column 4, lines 20-29), and that the communication program signals completion of its task by writing a "done" message to a semaphore

(column 4, lines 52-58). This is considered functionally equivalent to a "display rewriting completion event" to determine that the output screen has become definite.

Regarding claim 5, Triantafyllos teaches that the simulation is conducted discretely by iterating through the input characters of the test case (column 9, lines 49-55). Although Triantafyllos does not expressly state that the simulation stops when the output screen is referenced, the nature of a discrete simulation comprising individual input events renders this behavior an inherent property of the simulation. In every embodiment disclosed by Triantafyllos, the simulation processes an input event and then idles while waiting for the next input event (ex. column 8, lines 24-50).

2. Regarding claim 6, Triantafyllos teaches a system for automatically evaluating a program (column 3, lines 40-69) operating on a target system (column 3, lines 55-59; column 12, lines 18-44) by referring to an output screen as a result of a simulation of an arbitrary input event (column 3, lines 62-69; column 4, lines 29-39; column 10, lines 4-25; column 10, lines 49-52), the method of the system comprising:

monitoring a predetermined amount of time to reference the output screen
(LOOKFOR command description, column 5, lines 16-32; column 10, lines 35-48).

performing the evaluation at a time when the output screen becomes definite and referencing the output screen in accordance with the time (column 8, line 64 – column 9, line 17; column 9, lines 45-55, column 10, lines 4-15), and comparing the result of the simulation with data prepared in advance so that an automatic evaluation is carried out (column 10, lines 4-25; column 4, lines 29-39).

storing a comparison result indicating whether the program performed correctly or incorrectly (column 4, lines 29-39).

Regarding claim 7, Triantafyllos teaches that an application to be tested may be run on an emulator for a target platform (column 3, lines 53-69; column 12, lines 35-44). Triantafyllos does not expressly teach a time monitor portion of the simulation unit, however does teach that the system waits a predetermined amount of time in order to establish that the simulation result is definite (column 10, lines 35-48). It is therefore inherent that the invention of Triantafyllos has means for monitoring time.

Regarding claim 8, Triantafyllos teaches that the method waits a predetermined amount of time to reference the output screen (LOOKFOR command description, column 5, lines 16-32; column 10, lines 35-48). It is inherent that determining that a certain amount of time has passed is performed by a timer.

Regarding claim 9, Triantafyllos teaches that the time when the output screen becomes definite is determined by repeatedly sampling the screen memory until a predetermined time threshold is surpassed (column 10, lines 12-48). This is considered functionally equivalent to carrying out a logical sum operation of individual simulation results, since the method taught by Triantafyllos repeatedly scans the screen memory until a definite result of the simulation can be determined, this result being a Boolean true or false value.

Regarding claim 10, Triantafyllos teaches that the automated function test program includes a communication program, the communication program sends input events to the application under test (column 4, lines 20-29), and that the communication program signals completion of its task by writing a "done" message to a semaphore (column 4, lines 52-58). This is considered functionally equivalent to a "display rewriting completion event" to determine that the output screen has become definite.

Regarding claim 11, Triantafyllos teaches that the simulation is conducted discretely by iterating through the input characters of the test case (column 9, lines 49-55). Although Triantafyllos does not expressly state that the simulation stops when the output screen is referenced, the nature of a discrete simulation comprising individual input events renders this behavior an inherent property of the simulation. In every embodiment disclosed by Triantafyllos, the simulation processes an input event and then idles while waiting for the next input event (ex. column 8, lines 24-50).

Conclusion

3. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Art considered pertinent by the examiner but not applied has been cited on form PTO-892.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason Proctor whose telephone number is (571) 272-3713. The examiner can normally be reached on 8:30 am-4:30 pm M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kevin J Teska can be reached on (571) 272-3716. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-3713.

Any inquiry of a general nature or relating to the status of this application should be directed to the TC 2100 Group receptionist: 571-272-2100. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jason Proctor
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